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ABSTRACT

This report is the result of a year-long preservation planning study at the University of Tennessee-Knoxville Library, during which four task forces investigated the physical condition of the collections, environmental conditions of the libraries, state of disaster preparedness, and organizational issues relating to preservation. Task force findings revealed that 15.5% of the book collection is in a deteriorated condition, that problems exist in the control of heat and humidity in the environment, that the library is poorly prepared to cope with a disaster, and that procedural and organizational changes are needed to deal adequately with preservation issues. The report details 75 recommendations to the director, the most significant of which is the appointment of a preservation officer. Other major recommendations concern environment, physical facilities and equipment; disaster preparedness and control; preservation decision-making and treatment; non-print materials, microforms and special collections; staff education and user awareness; organization; external relations; and grants. (KM)

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EDITORS NOTES ON THIS PUBLICATION SERIES

This final report is one of ten in a series resulting from libraries conducting the OMS **Preservation Planning Program** (PPP). A two-year grant from the National Endowment for the Humanities enabled the OMS to select and work with ten Association of Research Libraries members as they conducted the **Preservation Planning Program** and served as demonstration sites for other libraries in their areas. Applications from interested libraries were screened in Fall 1984, and ten libraries were chosen to conduct PPP self-studies from 1984 to 1986.

The **Preservation Planning Program** is designed to put self-help tools into the hands of library staff responsible for developing plans and procedures for preserving library materials. A typical library takes from four to six months to complete the Program, which involves the cooperation of 25 to 30 staff members. Using a structured planning procedure, a manual, and an extensive resource notebook, library staff prepare a detailed action plan for local preservation program development for the next three to five years, with the on-site assistance of a librarian-consultant trained by the Office of Management Studies.

Most PPP final reports being with a discussion of the background of the institution and the external factors related to the current preservation situation. Task force reports then provide details on the specific concerns and interests of the individual sites. In a final section, libraries lay out their implementation plans.

Copies of PPP final reports are available for $10.00 each, either through library distributors, or by direct order from the OMS. Prepayment is required, and reports should be ordered by complete title, including library name. OMS Publication order forms are available by writing or calling OMS, 1527 New Hampshire Ave., Washington, D.C. 20036. 202 232-8656.

The Office of Management Studies was established in 1970 by the Association of Research Libraries with financial support from the Council on Library Resources. The Office also has received funding from The Andrew W. Mellon Foundation, The General Electric Foundation, The National Endowment for the Humanities, The Lilly Endowment, inc., and the H.W. Wilson Foundation. The OMS provides self-study, training, and publication programs and services to academic libraries, to assist them with organizational and staff development and strategic planning for change.

PRESERVATION PLANNING PROGRAM

UNIVERSITY OF TENNESSEE, KNOXVILLE LIBRARY

FINAL REPORT

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August 8, 1986

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EXECUTIVE SUMMARY

As one of ten demonstration sites funded by the Association for Research Libraries the University of Tennessee, Knoxville Library began an extensive preservation planning study in the summer of 1985. Using a methodology devised by the Association's Office of Management Studies a six-person Study Team directed the year-long study. Four task forces conducted detailed investigations into the physical condition of the collections, environmental conditions in the libraries, the state of disaster preparedness, and organizational issues relating to preservation. Thirty-six staff members participated in the work of the task forces and the Study Team.

The task force findings revealed that 15.5% of the book collection is in a deteriorated condition, that problems exist in the control of heat and humidity in the environment, that the library is poorly prepared to cope with a disaster and that procedural and organizational changes are needed to adequately deal with preservation issues.

Seventy-five recommendations to the Director are detailed in this final report. The major recommendation is the appointment of a preservation officer. Pending that the Study Team recommends establishment of a preservation committee to begin implementation of the recommendations. Other major recommendations concern further collection surveys, steps to improve the environment, completion of the draft disaster plan and a staff and user education program. Procedures needed for the handling of deteriorated materials are outlined and availability of a wide range of treatment options are recommended. Suggestions for evaluating progress in collection preservation also are made.

INTRODUCTION

The University of Tennessee, Knoxville Library was fortunate to receive one of ten demonstration grants awarded in the fall of 1984 by the Association of Research Libraries as part of its preservation self-study program. It was regarded as a good opportunity for the UTK Library to begin the necessary planning for preservation of its collections.

Because of the construction of a new central library, which will be ready for occupancy in the summer of 1987, it seemed to be an especially appropriate time to do such planning. The new facility would provide space for new and enlarged activities including preservation activities. In the building program, space had been requested for a microfilming lab as well as for expanded in-house mending activities. However, the pros and cons of such activities had not been explored. In addition, the relocation would provide a natural opportunity for examination of existing policies and implementation of new or revised policies. Such issues as appropriate shelving and other equipment, provision of a better environment, disaster preparedness and appropriate procedures for moving 1.4 million volumes also loomed large in everyone's thinking. The study would provide baseline information which could be compared later with conditions after the library relocation.

Methodology

A Study Team was appointed by the Director and charged with conducting the self-study and with recommending a multi-year preservation plan for the UTK Library.

Planning proceeded in three phases. In Phase I the Study Team conducted a background study to assess the current state of preservation planning at the UTK Library and to place the Team's assignment in context. During Phase II four task forces were appointed to examine environmental conditions, the physical condition of the collections, disaster preparedness, and organization issues. Volunteers from the staff served on the task forces which worked on their assignments from November 1985 until February 1986. Each task force issued a report to the Study Team. Phase III called for the Study Team to assimilate the task force reports and to make a final report and recommendations to the director concerning preservation at the UTK Library.

The ARL documentation and consultant services provided by the grant served to focus our planning efforts. Carolyn Harris, Preservation Officer at Columbia University, served as UTK's consultant and provided expert guidance.

This final report is the result of many hours of dedicated work by the staff members listed on the following page plus the time of the many people on-campus and off-campus who were consulted during the course of the project.

PRESERVATION PLANNING PROGRAM TASK FORCES

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THE UNIVERSITY OF TENNESSEE AND ITS LIBRARY

The University of Tennessee, Knoxville, founded in 1794, ranks among the nation's larger universities. In 1984/5 it awarded 3,558 bachelor's and 1,563 advanced degrees. Knoxville is the largest and primary campus of the UT multi-campus, multi-purpose system and serves as the state's Official University and Land Grant institution.

In publicly aided higher education in Tennessee, the Knoxville campus is the center of advanced graduate training and of research in the state. Its library, known as the state's "premier" research library, has 185 full-time employees, of whom 45 have faculty rank. Several units compose the library: Main, Undergraduate, Music, and Agriculture-Veterinary Medicine. In the fall of 1985 there were 25,042 students and 1,077 faculty on campus.

The UT Knoxville Library supports the three-fold mission of the university: instruction, research, and service. The instruction program includes nine colleges and six schools: Liberal Arts, Business Administration, Engineering, Agriculture, Veterinary Medicine, Education, Human Ecology, Communications, Nursing, Architecture, Biomedical Sciences, Library and Information Science, Planning, Social Work, and Health, Physical Education, and Recreation.

Support is also provided for active research on campus, both of the individual professors and for grant-funded research activities like the Andrew Johnson Project or the Agriculture Experiment Station.

There are also service commitments of the university to be supported; these include programs like the University Evening School, Cooperative Extension Service, Municipal Technical Advisory Service, and the County Technical Assistance Service. As the major state resource for the provision of certain library materials, the library attempts to make available those things needed by business and manufacturing concerns as well as by many educational institutions in Tennessee.

Though there is mention of "the library" at an earlier date, the first librarian was appointed in 1839. It was 1853, however, before an appropriation ($100.00) was made for the library. Following the passage of the Morrill Act and the naming of the university as the state's land-grant institution, there was substantial growth in the library, particularly in the agriculture collections. By the early 1950's it was well on its way to becoming the state's comprehensive university and in 1962 the library was elected to membership in the Association of Research Libraries.

The library's reference collections are extensive. Its depository status for U.S. government documents began in 1907. Tennessee state government documents are collected and standing orders are in place for United Nations (and subsidiary agencies) publications. The library is participating in the Eighteenth Century

Short Title Catalogue Project. It is a member of the Center for Research Libraries.

The library faculty includes librarians with subject specialties where appropriate. They offer extensive automated information retrieval from all major databases. Librarians work closely with campus researchers in the joint effort of collection development.

The branch libraries contain specific strengths. Agriculture-Veterinary Medicine holds nearly complete files of USDA documents as well as state agricultural documents. The branch participates in a publication exchange program with several hundred foreign and domestic institutions. The veterinary medicine collection is particularly strong in comparative medicine. The Music Library acquires scores and sound recordings as well as books and periodicals. Scores are procured on an international basis. The Undergraduate Library is noted for its extensive non-print collection of film, audio and video tapes and slides.

The library has equipment and services dedicated to providing access for the handicapped. A TTY service, Visual Tek equipment, a Braille dictionary, and a Kurzweil Reading Machine are available.

The Special Collections division is the repository for rare books, manuscripts, the University Archives, and other unusual items of non-standard format.

Total library holdings on June 30, 1985, were 1,524,127 volumes; 2,765,578 special items (manuscripts, maps, etc.); 40,562 pamphlets, catalogs, and directories; 1,788,874 non-print items; 77,762 uncataloged government documents; and 4,300 motion pictures. There are also 16,805 currently-received serial titles in the collections.

The bulk of the library's holdings resides in the crowded Main library, built in 1930 with a major addition in 1959. Air temperature and humidity control are inadequate generally. One section, however, added in 1966, is in the Special Collections area and is equipped with temperature and humidity controls. Some 220,000 volumes of rarely used materials are temporarily housed in an environment-controlled storage building. The Undergraduate library collection has been crowded into a less than satisfactory location while a new, major library facility is being constructed. The remaining branches are located in modern buildings.

A 27-million dollar library building program is currently underway. When completed in early 1987, this structure will become the Central Library, housing primarily a humanities and social sciences collection. The "old Main" building will then contain Special Collections, a science-technology branch, and eventually a map library, currently maintained by the Geography Department, and a collection of up to 100,000 volumes designated for restricted access.

The Undergraduate collection will be divided between Central and Science-Technology, disappearing as an entity.

PRESERVATION HISTORY

As the name implies, the Binding and Preservation Department is responsible for preservation. In 1965, activities were limited to binding and rebinding. By 1972, departmental responsibilities were expanded to include mending and bookcleaning and, during the past two or three years, encapsulation work and end-processing of new library materials.

Since 1965 a continuing program of retrospective binding has resulted in the binding or rebinding of well over one-third of the collection, utilizing a sound commercial binding contract.

In 1984 the library sponsored a regional meeting that focused attention on preservation issues. That the university was the setting for the conference is an indication of interest in the problems of preservation.

In general, insufficient attention has been directed to preservation measures. But one achievement has been the increased awareness of the value of microforms as an aspect of preservation. Gradually the viewpoint that microforms were "acceptable" led to significant purchases of materials in microformats. Within the past year, for example, an effort has been made to purchase microforms systematically from a commercial publisher in lieu of binding journals that are printed on short-lived newsprint.

After two years of work by librarians, there appeared in 1980 the Descriptive Guide to the Development of the Collection. This was the first comprehensive written statement of collection development policy. The scope statements are now in serious need of revision; and, without work, they will be woefully inaccurate on day one of the reorganization resulting from moving into the new central library.

The scope statements did not address overall policies of retention and replacement although these concerns are implied. Replacement policies, until recently, have been implemented with differing attitudes and timetables among the library units. The Geac computer program, REPRO, has brought some consistency to replacement action for items marked "missing" on the circulation system.

When items cannot be replaced through purchase in any format, the library faces a dilemma. Much of the material is not suitable for retention in Special Collections under its scope guidelines; yet it needs some special consideration to preserve it until some other solution is found. Presently, the only actions are marking the Geac item record (BRITBK) which makes it a non-circulating item and/or making protective enclosures.

The practices in effect in collection maintenance have an important cumulative impact over time on the preservation of materials. Cleanliness of materials is a factor of preservation and in the comfort of use; yet there has been no systematic cleaning of all materials and shelves since 1976. The mishandling of materials by users and library staff constitutes a threat to the survival of materials. The presence of reliable, economic photocopiers allegedly reduces mutilation and theft; yet these machines pose a preservation hazard in the improper handling of materials by users while making copies and in the exposure of pages to intense light.

Despite some small or "contained" disasters, a disaster preparedness policy tailored for the library system is still to be written.

EXTERNAL FACTORS INFLUENCING PRESERVATION PLANNING

Networks and resource sharing

Interlibrary lending has increased dramatically in the last decade for the library: lending rose by 90% and borrowing by 50%. About 75% of the items requested and sent went to other libraries in the state and region. Various reciprocal agreements facilitate and promote interlibrary lending. Such lending of materials is potentially damaging. The UTK Library refuses to loan some materials in poor physical condition.

Cooperative arrangements can enhance preservation efforts and do so in some regions. In the Southeast SOLINET is gradually entering the area, but, so far, the contribution is limited to promotional effort and information sharing.

Publishing trends

The major factor responsible for the deteriorating condition of library materials is the highly acidic paper produced since about 1850. This results in brittle and rapidly deteriorating paper. One recent estimate projects that for every one million books in a collection, 10,000 become brittle each year. The rate is increasing so that, by the year 2000, 20,000 per million will be in this condition each year.

The library and publishing professions have cooperated in the development of a new "Standard for Permanent Paper for Printed Library Materials." Wider use of such paper would help alleviate the problem of paper deterioration in the future. In addition to the paper used, the materials and methods of binding determine the usable life of a book. Often cost-cutting practices in publishing, which affect usable life span and rebindability, create problems to be faced by libraries in preserving materials for use over time.

The rate of damage to library materials is affected by environmental agents which react with substances in the materials and promote deterioration through chemical, physical, and biological action. Such agents include light, heat, humidity, air pollution and dirt, fungi and insects, people and disasters. Proper environment can, at least, slow the rate of deterioration.

Research and development

Much has been learned in the past two decades about preservation needs and about methods for prolonging the useful life of materials. Techniques such as freezing and vacuum drying of water-damaged books, encapsulation in chemically-inert polyester, and deacidification processes have been studied and tested most recently.

The Library of Congress has assumed a leadership role in fundamental research and development in preservation. Increased interest and research, are evident through greater programming activity of the RTSD Preservation of Library Materials Section and through the grant funding available from the National Endowment for the Humanities, the Council on Library Resources, and similar agencies.

The need to provide quality training programs for conservation and preservation personnel is being considered by an increasing number of professional organizations and library schools. Moreover, academic libraries are appointing preservation technicians and administrators.

THE TASK FORCE ON ENVIRONMENTAL CONDITIONS

Charged with the environmental survey of Hoskins Library and two branches, the Agriculture-Veterinary Medicine Library and the Music Library, the task force monitored indoor and outdoor levels of temperature and humidity, measured indoor light, and evaluated support structures and housekeeping in these locations. Although lasting only two weeks during January and February, 1986, the monitoring period included a variety of conditions: outdoor temperatures ranged from 0 to 73 F, and outdoor humidity levels ranged from 23% to 100%.

In preparation for the survey of temperature, humidity, and light levels, the task force obtained several pieces of monitoring equipment and produced forms on which survey data could be recorded. The equipment consisted of three psychrometers, a hygrothermograph, and a light meter. The forms included space evaluation sheets for brief descriptions of observations and problems, tables for the entry of climatic data, and graphs displaying temperature and humidity levels at each monitoring hour alongside charts of outdoor levels. (It was found that the amount of light was difficult to measure precisely, so charting was not attempted.)

Sites for monitoring were selected because of their being representative of either typical or extreme conditions.

The findings of the study revealed a number of serious problems in the three libraries: the climate is too hot and dry, and is highly variable - especially in climate-controlled areas. Temperatures in some locations were nearly twenty degrees above the acceptable range of 68 $\pm$ 5 F. Humidity levels were even further astray - in one location the reading was more than 40% below what is considered an acceptable norm (50% $\pm$ 5%). In the climate-controlled portion of the library, where conditions were the least consistent, the level of moisture fluctuated by almost 10% in an hour. Evidence indicated that this variation was usually unrelated to the weather. Instead, a faulty system is suspected. The amount of artificial light to which the collections are exposed rarely exceeded the tolerance range of 30 to 50 foot-candles, but strong direct sunlight affects certain stack sections.

[It should be noted that an early positive result of this study was installation of new climate control equipment in the Special Collections Library. University Physical Plant personnel decided to abandon old machinery after evidence of malfunction was presented. Constant monitoring carried out with a borrowed hygrothermograph furnished proof that temperature and humidity levels were out of control. Even though temperatures were fairly constant and humidity percentages were low during the formal study period, continued monitoring revealed shocking variations. A call for emergency service brought about complete replacement of the faulty system. Without monitoring, which was an outgrowth of the study, the malfunctions might have escaped unnoticed. Another positive result was acquisition by the library of its own hygrothermograph.]

In the inspection of various support structures, a few harmful situations were observed. Book drops not only lacked sufficient padding to break adequately the fall of returned materials, but were constructed so that items would fall a couple of feet before landing. The shock from such a long drop and hard landing could cause serious damage to book bindings. In rooms containing ranges of books, the great height of stacks placed the uppermost shelves of books dangerously close to heating ducts and fluorescent lights. Many books in the oversize stacks were found to be inadequately supported. Because pieces in this section are shelved upright, tall, thin items bend under their own weight. Horizontal shelving would relieve this stress. Aside from these items the overall condition of support structures (cabinets, shelves, book trucks, tables, exhibit cases, boxes, and folders) appeared to be very good.

Although housekeeping was found to be excellent, evidence of food consumption was uncovered outside of designated staff lounges. Such infringements of policy are believed to contribute to the increase of insects and vermin, both of which pose a threat to library materials.

TASK FORCE FOR THE SURVEY OF THE COLLECTIONS

The Task Force was composed of twelve volunteer members representing a broad range of activities within the UTK library system. Prior to the actual physical examination, two individuals were appointed to chair sub-groups. One group surveyed the physical types of materials in the collection, established where they were located, and estimated the number of items in each type. Another was responsible for using the data generated by the first group to map the collection and to design a survey program making use of available automation services and facilities.

The subjective nature of any decision regarding the physical condition of non-print media seemed to indicate the need for an independent survey at a later date. The artifactual value of many of the items in Special Collections was deemed reason enough to negate any survey which would obviously result in some damage to the materials. Therefore, the aforementioned areas were involved in the survey only by means of an interview with the head of Special Collections and those responsible for the non-print collections.

Due to its widespread use and simplicity, the Task Force adopted the Stanford model for testing the physical condition of the collection. The system uses three numbers, 0 (good), 1 (moderate), and 2 (deteriorated) to indicate three aspects of the physical status of a book: paper condition, binding condition (page attachment), and board and cover condition. The overall grade of a book was determined by comparing the three "scores" for each book to a schedule which is heavily weighted for paper quality. This Stanford model was used to test a computer-selected random sample of 664 volumes. The sample size provided a confidence level of 99% with a $\pm$ 5% tolerance.

The results of the survey permit a projection of 15.5% deteriorated books in our collection, another 24.5% moderately deteriorated, and 59.9% in good condition. By using the 1984/85 statistical report of the library, we can assume that of the total book collection of 1,494,701 (excluding Special Collections), 597,881 volumes are at risk. Further, we can assume from computer analyzed data that the Library of Congress classes in poorest condition are classes "S" (agriculture), "P" (literature), and "H" (business, etc.).

Although we have great faith in the testing methods and procedures used in this survey, the numbers of deteriorated books appear low when comparing our results with those of other institutions. Some task force members suggested that the data gathered for year of publication indicated that possibly sufficient numbers of books had been transferred to Special Collections to bias the results. Of the total of 664 volumes tested, only 26 bore pre-1900 imprints (3.9%); four hundred and fifty-nine (459) or 69.1% were published since 1960.

The survey has proven valuable in that even though the final result may be somewhat "corrupted" it is clear that the UTK Library has large numbers of deteriorating books and that the survey has provided at least a dozen individual staff members with an insight which they did not possess before. It is the recommendation of the group that this study be considered the first phase of an ongoing detailed testing of the collection by L.C. class, specialized collection, or specific location.

TASK FORCE ON DISASTER CONTROL

The Task Force on Disaster Control was asked to (1) investigate and analyze disasters which have happened in the past and identify problems which might contribute to a disaster in the future, and (2) to prepare a Disaster Plan for the UTK Library System. The Task Force began its work by reviewing the library literature on disasters and soliciting information and advice from the University's Environmental Health and Safety Unit, Preventive Maintenance staff and library unit heads. In addition building representatives from Ag-Vet-Med, Music, Hoskins and UGL Libraries were interviewed concerning building conditions.

In its report to the Preservation Study Team, the Task Force identified several problems: (1) the need for additional insurance coverage on materials in the collection, (2) leaking pipes in the air conditioning and heating units (Hoskins), (3) ongoing leaks in the roof of Hoskins Library and (3) periodic plumbing problems.

The UTK Library has been fortunate never to have experienced a disaster such as fire or flooding affecting a large portion of the collection. In a review of notable incidents occurring over the past twenty-five years, the fire which occurred in the bibliographic alcove in January 1979 is considered the UTK Library's most serious disaster. Incidents causing water damage to library materials have occurred on occasion. However, because of the quick action of persons in Auxiliary Services, Circulation, and the Binding and Preservation Departments, few materials have suffered major damage.

Even though the library has experienced success in recovery of fire and water damaged materials and now has several persons on the staff knowledgeable in managing disaster situations, in the opinion of the Task Force, UTK Library would still be inadequately prepared to handle disasters involving damage to large portions of the collection. The rationale here is that there are several elements essential to effective disaster readiness which are not currently in place at the library. They are:

1. A Disaster Plan outlining procedures which should be followed, a list of essential supplies, volunteers, and resource persons

2. A Disaster Action Committee to assume leadership responsibility

3. Staff training and awareness programs covering the Disaster Plan, emergency procedures and preventive measures for disaster proofing the library building.

TASK FORCE ON ORGANIZATION

The Task Force on Organizational Issues interviewed 21 key staff members with regard to preservation activities. They were asked about present levels of effort in their respective areas and about their priorities for the enhancement and promotion of preservation in the library. The head of Binding and Preservation spoke to the group about technical matters and the historical context of present UTK activities.

Information from interviews was tabulated, where appropriate, and analyzed. This yielded a profile of preservation work throughout the library, an estimate of the amount of staff time devoted to specified kinds of preservation activity, a composite list of ranked priorities, a list of equipment needs, and numerous recommendations.

At this point the Task Force was faced with the realization that preservation was, in fact, a part of everyone's job; yet somehow the effort needed recognition, guidance, funding, and authority. Nine formal recommendations for action were then formulated which were aimed at bringing centralized planning and coordination to the library's commitment to preservation.

These far-reaching recommendations suggested the inclusion of preservation policy in each collection development "scope statement," an annual review of preservation's budget impact, and the creation of a post or a committee as an agent to oversee and guide preservation library-wide.

RECOMMENDATIONS

[Note: Where appropriate, scheduling and cost data are included]

I. ENVIRONMENT, PHYSICAL FACILITIES AND EQUIPMENT

The move to the new Central Library in the summer of 1987 will dramatically alter the nature of the library environments, physical facilities and equipment for major parts of the collections and service units. The Agriculture-Veterinary Medicine and Music libraries will be unchanged. The new Central Library with state-of-the art HVAC systems and sufficient shelving space presumably will allow those parts of the collection to be properly housed. The Hoskins building is scheduled for renovation and restoration in the future but, in the meantime, it will continue to house library collections including the valuable and fragile Special Collections.

Particular attention should be given to maintaining as good an environment as possible in the interim.

A. Hoskins Environment

Recommendation 1. Repeat the study of environmental conditions in Hoskins after the library relocation and changes in 1987. A new study conducted in all locations during summer months would complement winter readings.

Schedule: Fall 1987 & Summer 1988 Cost: Staff time

Recommendation 2. To provide protection for the collection from water damage, known leaks should be examined and fixed promptly. Areas identified during the work of the task force have been repaired.

Schedule: As occur

Recommendation 3. Attempt to secure a full-time maintenance person for Hoskins Library. At present, two persons are assigned to the building, but they are also responsible for maintenance work in ten other buildings on campus. The age of the Hoskins Library and the value of the collection housed in the building warrants the attention of a full-time maintenance person.

Schedule: 1987/88 Cost: None to Library

Recommendation 4. Remove temporary walls (or partitions) in Hoskins as soon as possible. When practical, use caging instead of temporary walls, until the HVAC system is replaced.

Schedule: 1987/88 Cost: ca. $5,000.00

Recommendation 5. Reduce temperatures by adjusting thermostats, shutting off outlets, or by any available means. Temperatures in the materials storage areas should be maintained as close to ideal as possible.

Schedule: As needed

Recommendation 6. An effort should be made to maintain relative humidities at 50%, except that vellum bindings should be housed in an area supplied with a 60-65% humidity, and microforms storage areas should be provided with a steady 35-40% humidity level.

Schedule: Immediately

Recommendation 7. Create a secure and proper storage area in Technical Services for Special Collections materials waiting to be cataloged.

Schedule: 1987 Cost: Part of new building equipment

Recommendation 8. The air conditioning and heating units in the Hoskins Library have leaking pipes, the system's longevity is questionable, and replacement parts are no longer available. In light of these findings the Study Team recommends replacement of the cooling and heating units in the Hoskins Library. It is not likely that this will be done until the renovation of the building. At that time the library administration should assure that this is done.

Schedule: Depends on University scheduling

B. Central Environment

Recommendation 9. After the library has "settled into" the new building an environmental conditions survey of that facility should be conducted.

Schedule: 1988 Cost: Staff time

C. Light Filtering

Recommendation 10: Provide light shields or filters for all windows in spaces where library materials are housed. Priority should be given to windows with southern and western exposures. Shields now on west windows of the Hoskins Library third floor should be replaced.

Schedule: 1986/87 Cost: $2.85 sq. ft.

Recommendation 11: Use UV filtering sleeves in selected areas such as Special Collections and where books are in close proximity to lights.

Schedule: 1986/87 Cost: $1.00 per foot

Recommendation 12: "Warm white" fluorescent tubes should be used throughout the library buildings instead of "cool white."

Schedule: As old bulbs burn out Cost: None to library

Recommendation 13: Use timer or dimmer switches on lights where possible and appropriate. Suggested locations include Special Collections and Restricted Access.

Schedule: 1986/87 Cost: Major

D. Shelving

Recommendation 14: After the relocation of library services use horizontal shelving for oversize materials. Oversize materials should be placed horizontally on the shelves no more than three deep.

Schedule: 1987

Recommendation 15: In regular stacks areas when it is necessary to shelve an item on its side, it should be shelved spine down. Double spine labels could be used on individual items identified for routine spine-down shelving.

Schedule: Immediately

Recommendation 16: To avoid spine-down shelving, stacks shelving should be adjusted when possible. The Study Team recommends that shelving be adjusted as soon as possible in the New Book shelving which was identified as an especially visible need.

Schedule: Immediately

Recommendation 17: Shelving over 7.5 feet should be avoided after the collections relocation.

Schedule: 1987

E. Bookcleaning

Recommendation 18. Develop a plan to fumigate and clean all gift materials which may require it, and, if necessary, materials printed abroad. A freezer-fumigator/book dryer has been requested as part of the new equipment for the Central Library.

Schedule: Fall 1987 Cost: $16,000 for freezer (part of new library equipment)

Recommendation 19. Institute a regular program for vacuuming and dusting books in all areas of the Central library and branches. The Study Team recommends that this be a cycled program and that student assistants be used. The Binding and Preservation Department should be responsible for such a program. New vacuum cleaners will be needed.

Schedule: 1987/88

F. Bookdrops

Recommendations 20. Make provision to empty outside book drops more frequently when the libraries are closed for the holidays and between sessions. This should be made a part of the regular duties of one or more staff members and they should be compensated for it.

Schedule: Immediately

Recommendation 21. Problems have resulted when book drops are full and materials are left outside. Notices should be posted at book drops informing patrons they are responsible for any materials left outside the book drop.

Schedule: Immediately

Recommendation 22. The availability of better carts for placement at the book drops should be investigated. Carts of a fire-resistant material would be desirable. Attention should be paid to padding or springs to minimize shock to falling volumes.

Schedule: Immediately Cost: Part of new library equipment

Recommendation 23. Fire and/or smoke detectors should be located near the book drops to help guard against vandalism and arson.

Schedule: Immediately Cost: Moderate

G. Photocopying

Recommendation 24. Preservation concerns should be a factor in the selection of photocopying machines to buy or lease. Availability of machines with better features should be monitored.

Recommendation 25. Preservation photocopiers should be purchased or leased for selected locations. Special Collections, Restricted Access, Interlibrary Loan and Reference are potential users of such machines.

Schedule: 1987/88

Recommendation 26. Copying privileges should be curtailed for those materials which are judged to be brittle and which cannot be replaced. Appropriate means of identifying and marking such items individually should be developed.

Schedule: 1986/87

H. Food and Drink

Recommendation 27. The policy on food and beverages in the library should be re-examined before the relocation. The Study Team suggests that the Library restrict food and beverages to designated areas--such as the vending area planned in the Central Library--and to enforce vigorously such restriction. Staff consumption of food and beverage in public areas should be forbidden.

Schedule: 1987

Recommendation 28. Amenities for the staff will be improved with our expanded facilities. At that time the policy on the use of coffee pots and other small appliances in library departments, which are potential fire hazards, should be re-examined.

Schedule: 1987

II. DISASTER PREPAREDNESS AND CONTROL

A. Disaster Plan

Recommendation 29: The draft disaster plan should be completed promptly.

Schedule: Immediately Cost: Staff time

Recommendation 30: Make available copies of the disaster plan in each library unit. Staff members should acquaint themselves with the location of the plan and their role in response to a disaster.

Schedule: After plan is completed

Recommendation 31: The UTK Disaster Plan should be reviewed and updated annually.

B. Disaster Preparedness

Recommendation 32: The Task Force on Disaster Control identified seven supply items which are essential to recovery from fire or water damage. The Study Team recommends that the following items be purchased for each library unit and available at all times.

Flashlights
Large Flashlights or Lanterns
Plastic Sheeting
Rubber Gloves
Surgical Masks
Unprinted Newsprint
White Paper Towels

Schedule: Immediately Cost: $500 est.

Recommendation 33: Provide adequate insurance coverage for materials and equipment in the UTK Library:

a. Update and review insurance coverage on the collections annually.

b. Investigate separate insurance coverage for materials and equipment considered to be of high value and titles which are irreplaceable (i.e., materials housed in the Special Collections Department and GEAC equipment in the Systems Department).

Recommendation 34: Examine the Music Library's fire alarm system and take appropriate action to improve the system's sound mechanism so library users will be adequately notified of fire or other emergencies in the music building.

Schedule: 1986/87

Recommendation 35: Purchase halon security system for the Special Collections Department. This type of system would not only detect fire, but would activate a fire-retardant gas to put out any

flames. Halon gas extinguishing systems are especially desirable for rare book collections where water from sprinklers or fire department hoses might cause irreparable damage.

Schedule: As soon as possible

Recommendation 36: Investigate need for additional fire extinguishers in the Hoskins library. Suggested locations include: the Periodicals Reading Room, and equipment room in sub-basement.

Schedule: 1986/87

Recommendation 37: Hire night guard to patrol and safeguard library building during evening/weekends/holidays when the library is otherwise unoccupied.

Schedule: 1987/88

Recommendation 38: Sponsor a preservation workshop with regional or national preservation expert. Invite area librarians and staff to participate. Program might include preservation techniques, disaster prevention and recovery.

Schedule: 1986/87

Recommendation 39: Inspection of each library location by the local fire department should take place annually. This procedure would not only point out potential hazards in the library buildings, but also would familiarize the fire department with each location and special features of particular areas of the collection.

III. RELOCATION

The relocation of the library collections in the summer of 1987 must be planned and executed with proper regard for preservation concerns. The moving and handling of most of the volumes in the library have the potential for seriously damaging materials. The following recommendations are made concerning the relocation:

Recommendation 40. Regular library employees should be used as supervisors of teams of movers. The should be reminded of proper handling techniques and be given any necessary training.

Recommendation 41. All temporary employees should be trained in the proper handling of library materials and the proper moving of furnishings.

Recommendation 42. Volumes housed at the Storage Facility should be thoroughly checked for pests before they are moved to the Central Library or the Science/Technology Library.

Recommendation 43. Volumes should be vacuumed before they are moved to the Central Library. Volumes remaining in Science/Technology or moved to it also should be vacuumed.

IV. PRESERVATION DECISION MAKING AND TREATMENT

A. Replacement decisions and treatment

The Task Force for the Survey of the Collections demonstrated that several hundred-thousand volumes in our collections are in poor physical condition. The Task Force on Organization found that many departments and units were performing preservation-related duties especially concerning the replacement or handling of these materials. The poor condition might be due to brittle paper or to mutilation or to heavy use. A lack of coordination, standardization and written procedures was identified as problems.

Recommendation 44. General procedures should be developed for identifying and handling materials in poor condition throughout the library system. Handling of individual items should be routinized as much as possible. The procedures must include the following elements:

a. guidelines for recognizing materials in poor condition and when to send them for treatment

b. guidelines for making collection development decisions regarding retention of content or of physical item.

c. appropriate methods for tracking and controlling materials as they move through the system

d. guidelines for deciding on treatment for each item (appropriate treatment options should be available)

e. separate tracking of replacement costs to include treatment methods (photocopying, microfilm and new copies)

Schedule: 1986/87

Recommendation 45: The various options for microfilming archival copies of deteriorating materials should be investigated. Options include, but are not limited to, in-house methods, contracted services, and cooperative microfilming arrangements. The UTK Library's participation in any regional cooperative arrangements which may become available is especially encouraged.

Schedule: 1986/87

Recommendation 46: A variety of treatment options should be available. Microfilming is neither appropriate nor desirable in every case. Examples of other options include deacidification, preservation photocopying, rebinding, construction of protective enclosures, replacement and discarding.

B. Mending

The need exists to do basic mending and repairing of library materials (mostly printed) in the service units of the library system. Currently, no coordination or proper training is given for this activity. As a result sometimes inappropriate methods and materials are used in making such repairs.

Recommendation 47. A staff member in each appropriate service unit should be identified as responsible for repairs and should be given adequate training and materials to do the job. Retraining and upgrading of techniques and materials should be a part of the program. It is suggested that this recommendation be implemented on an experimental basis in one unit first.

Schedule: 1986/87

C. Restricted Access Collection

Plans after the relocation call for the creation of a restricted access collection for materials identified as inappropriate for the circulating collection. Among the library staff there are differing opinions and assumptions on what should be included in such a collection. A major purpose of creating the restricted access collection is to protect fragile materials.

Recommendation 48. Guidelines for the restricted access collection and its place in the administrative structure of the library should be developed. When such guidelines are developed it is suggested that the following types of materials be considered for placement in that collection:

a. Items with the material type BRITBK in Geac.

b. Long runs of periodicals which are not Special Collections materials but which should not be on the open stacks. An example is Puck. It would be appropriate to have filmed files for many such periodicals.

c. Fragile or brittle materials awaiting treatment.

d. Art materials with special plates.

e. Other materials susceptible to mutilation when on the open shelves.

Schedule: 1986

D. Non-Circulating Materials

In addition to fragile materials which should be placed in the Restricted Access collection there may be items in open stacks which should be identified as non-circulating or as non-circulating for ILL purposes.

Recommendation 49. Effective procedures should be implemented for visibly identifying for users and staff library materials which are non-circulating. It is assumed that all such materials will not be in Restricted Access. Consideration should also be given to similarly identifying materials which Interlibrary Loan will not lend. Geac is presumably the ultimate mechanism for guaranteeing the success of this recommendation.

Schedule: 1986/87

Recommendation 50. The circulation of journals should be restricted because of the damaging effects of out-of-library circulation on large journal volumes. The expense and difficulty of replacing journal volumes are a consideration in this recommendation.

Schedule: 1986/87

V. SPECIAL AREAS

A. Non-print and Microforms

Non-print and microform materials were not included in the survey of physical conditions of library materials because of time constraints and the special nature of the materials. However, this is a heavily used portion of the collection and there are concerns about its physical condition.

Recommendation 51: Physical surveys of the condition of the non-print and microform collections should be performed.

Schedule: 1987/88

Recommendation 52: A system of routinely cleaning microfilm materials should be instituted. Equipment to clean, lubricate and inspect such materials should be acquired.

Schedule: 1987/88

Recommendation 53: All metal microfilm reels should be replaced with plastic reels. A potentially damaging chemical reaction is possible between the metal reels and the microfilm.

Schedule: 1986/87

Recommendation 54: The availability of specialized containers for shipping microfilm for ILL purposes should be investigated. Such containers should be used if available.

Schedule: 1986

B. Special Collections

Because of the nature of its materials Special Collections requires particular attention to the condition of its collections. Some significant programs have been in place in the unit for some time such as the encapsulation of Sanborn fire insurance maps and the phase box program. Because of time constraints and the delicate nature of many of the materials, Special Collections was not included in the survey of the physical condition of the collections.

Recommendation 55: A physical condition survey of Special Collections should be conducted in the future.

Schedule: 1986/87

Recommendation 56: Following the physical condition survey a long-range plan for the preservation and conservation needs of Special Collections should be formulated and implemented.

Recommendation 57: Deteriorated materials from Special Collections should be included in any treatment program for brittle books instituted by the Library. All appropriate treatments or solutions should be applied to these materials. For example, there are items which should be filmed for a users copy and the physical item archived and used under special circumstances only.

Recommendation 58: Continue the phase box program.

Recommendation 59: Seek grants for treatment. Special Collections materials may be especially appealing for such grants or donations.

VI. STAFF EDUCATION AND USER AWARENESS

A. Staff education and training.

Staff awareness of preservation concerns is a vital element in any library's preservation plan. Proper handling and processing by staff members can contribute greatly to the preservation of the collection. The enthusiastic participation of many staff members in the study demonstrated the interest in the subject that exists among the staff.

Recommendation 60. A staff education program in preservation concerns should be developed. Such a program should include the following elements:

a. Instruction in how to remove books from the shelf, how to shelve books properly, and how to shift books when shelves become too crowded.

b. Instruction in acceptable methods for packing book boxes for transit between branches.

c. Information on preservation procedures; e.g., what to do with a book in poor physical condition.

d. Preservation awareness.

Schedule: 1986/87

Recommendation 61. Training programs to increase staff awareness in prevention, preparedness and response to disasters should be developed. Library staff should be familiar with

a. Library emergency procedures.

b. Disaster Plan and each of its components

c. Function and location of all automatic fire systems (alarm boxes and annunciator panels)

d. Location of fire extinguishers and how to use them

e. Importance of standard fire prevention measures, good housekeeping and smoking discipline

f. Location of essential supplies for each unit and how to use them

Schedule: 1986

Recommendation 62. Discussion of the library's emergency procedures and Disaster Plan should be included as part of the formal orientation for new staff and student employees.

B. User Education and Awareness

Many of the recommendations in this report depend on the cooperation of the public and of the campus administration. The success of a preservation program can be greatly enhanced by a knowledgeable public. Public education and awareness should be an important element in our preservation plan.

Recommendation 63. The results of this preservation study should be disseminated widely. Issues for emphasis should be targeted. Examples include the ill effects of food in the library, brittle books and what we are doing about them, and the damage caused by book drops. Elements of such a publicity effort might include:

a. Posters

b. Articles in Context and the Daily Beacon and other university publications

c. Exhibits

d. Information for campus administrators

VII. Organization

At the present time preservation related activities take place throughout the library system and the Study Team does not see that it is necessary or desirable to change that. Preservation must naturally be the concern of all departments and units in the library system. However, codification of procedures, coordination and expansion of activities are needed.

Recommendation 64: The position of Preservation Officer should be added to the library's staff. Such a position is appropriate to a library of our size and distinction.

Schedule: 1987/88

Recommendation 65: Until a Preservation Officer is appointed, the Study Team recommends a standing committee on preservation composed of members from the three library divisions should be established. The committee would be the agent for implementing the recommendations of the Preservation Study Group and for maintaining a current awareness program in preservation development for the library system. After the appointment of a Preservation Officer the committee would become advisory to the Preservation Officer.

Schedule: Immediately

Recommendation 66: The standing committee on preservation should assume responsibility for administrative planning and preparedness to meet effectively all important disaster situations within the system. In addition the standing committee on preservation should appoint an ad hoc disaster preparedness committee annually to: (1) update the Library Disaster Plan (2) review all procedures pertaining to disaster prevention and (3) conduct a building survey of each Library location and make recommendations for needed improvements.

Recommendation 67: A library preservation policy statement should be developed. The effect of this policy should be reflected in all the individual scope statements which will constitute a revised edition of the Descriptive Guide to Development of the Collections.

Recommendation 68: Department budget forms should have a preservation component (based on the acquisitions model) to enable these costs to be recognized as continuing obligations. An annual review of the budgetary impact to the library should be made in order to gauge the preservation effort and accomplishment.

Schedule: 1987/88

Recommendation 69: An annual report should be expected as a part of the work of the preservation committee, and later the preservation officer. Such a report should include a review of accomplishments, which recommendations have been implemented, what has been the budgetary impact, etc.

Schedule: Two months after the end of the fiscal year.

VIII. External Relations.

A. University Offices and Departments.

Recommendation 70: Establish better communications with university departments responsible for housekeeping to convey the value of the collection and how they can contribute to the preservation of it. Raise their level of general awareness.

Recommendation 71: Establish better communications with university departments responsible for physical facilities maintenance and environmental controls to convey information in our preservation planning and how they can contribute to its effectiveness.

B. Regional Cooperation

Recommendation 72: Encourage and participate in regional cooperation in preservation through sponsorship of workshops, utilization of services and financial support when appropriate.

IX. GRANTS

The Study Team was asked to identify areas for grants and other fund-raising activities. There are numerous possibilities which must be pursued individually. The National Endowment for the Humanities announced last year a major initiative in grants for preservation activity. Potentially they will fund staff training and equipment purchases in addition to other activities. State and local sources might include the State Library, the Tennessee Commission for the Humanities, historical societies, local companies and private individuals. The donation of equipment or supplies might be appropriate in some instances. Individual donors might find attractive the funding of the preservation and conservation of particular items or collections in Special Collections.

Recommendation 73: The Preservation Committee and/or the Preservation Officer should identify specific needs, programs or problems for which to seek grant support.

Recommendation 74: The University Development Office should be encouraged to include needs in the preservation area in the Library Development Campaign.

X. EVALUATION

Recommendation 75. The Study Team should be reassembled one year after final acceptance of this report to evaluate progress towards implementation of the recommendations contained in this report.